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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Mukerjee et al.

Application No. 10/622,378

Filed: July 18, 2003

Confirmation No. 4367

For: ADVANCED BI-DIRECTIONAL
PREDICTIVE CODING OF VIDEO
FRAMES

Examiner: Richard J. Lee

Art Unit: 2621

Attorney Reference No. 3382-64472-01

CERTIFICATE OF MAILING

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PURSUANT TO 37 C.F.R. § 1.97(b)(3)**

Listed on the accompanying form PTO-1449 and enclosed herewith are several English-language and/or non-English-language documents. Applicants respectfully request that these documents be listed as references cited on the issued patent.

Copies of United States patents and United States published patent applications do not have to be provided to the Patent Office (37 C.F.R. 1.98(a)(2)(ii)). Copies of unpublished U.S. applications do not have to be provided, as long as the application is available on PAIR, as this requirement of 37 C.F.R. § 1.98(a)(2)(iii) has been waived by the United States Patent and Trademark Office pursuant to the Official Gazette Notice on October 19, 2004 (1287 OG 163). Applicants will provide copies of such patents or applications upon request.

Applicants filed this Information Disclosure Statement ("IDS") before the mailing date of a first Office action on the merits. As a result, no fee should be required to file this IDS.

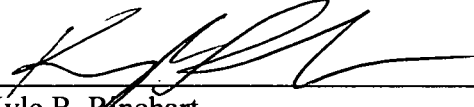
However, if the Patent Office determines that a fee is required for Applicants to file this IDS, please charge any such fees, or credit overpayment, to Deposit Account No. 02-4550.

The filing of this IDS shall not be construed to be an admission that the information cited in the statement is, or is considered to be, prior art or otherwise material to patentability as defined in 37 C.F.R. §1.56.

Respectfully submitted,

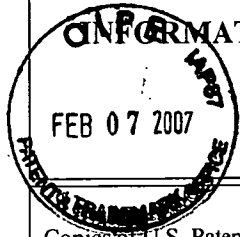
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Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
		4,661,849	4.28.1987	Hinman
		4,661,853	4.28.1987	Roeder et al.
		4,695,882	9.22.1987	Wada et al.
		4,796,087	1.3.1989	Guichard et al.
		4,862,267	8.29.1989	Gillard et al.
		4,864,393	9.5.1989	Harradine et al.
		5,089,887	2.18.1992	Robert et al.
		5,103,306	4.7.1992	Weiman et al.
		5,117,287	5.26.1992	Koike et al.
		5,132,792	7.21.1992	Yonemitsu et al.
		5,157,490	10.20.1992	Kawai et al.
		5,175,618	12.29.1992	Ueda
		5,424,779	6.13.1995	Odaka
		5,428,396	6.27.1995	Yagasaki
		5,442,400	8.15.1995	Sun
		5,461,421	10.24.1995	Moon
		5,467,136	11.14.1995	Odaka

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Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
		5,477,272	12.19.1995	Zhang et al.
		5,510,840	4.23.1996	Yonemitsu et al.
		5,565,922	10.15.1996	Krause
		5,594,504	1.14.1997	Ebrahimi
		5,598,215	1.28.1997	Watanabe
		5,598,216	1.28.1997	Lee
		5,617,144	4.1.1997	Lee
		5,619,281	4.8.1997	Jung
		5,623,311	4.22.1997	Phillips et al.
		5,666,161	9.9.1997	Kohiyama et al.
		5,799,113	8.25.1998	Lee
		5,835,144	11.10.1998	Matsumura et al.
		5,844,613	12.1.1998	Chaddha
		5,847,776	12.8.1998	Khmelnitsky
		5,901,248	5.4.1999	Fandrianto et al.
		5,929,940	7.27.1999	Jeannin
		5,946,042	8.31.1999	Kato

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Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
		5,952,943	9.14.1999	Walsh et al.
		5,959,673	9.28.1999	Lee et al.
		5,963,673	10.5.1999	Kodama et al.
		5,973,743	10.26.1999	Han
		5,973,755	10.26.1999	Gabriel
		5,982,438	11.9.1999	Lin et al.
		5,986,712	11.16.1999	Peterson et al.
		5,991,447	11.23.1999	Eifrig et al.
		6,005,980	12.21.1999	Eifrig et al.
		6,011,596	2.4.2000	Burl
		6,026,195	2.15.2000	Eifrig et al.
		6,067,322	5.23.2000	Wang
		6,072,831	6.6.2000	Chen
		6,094,225	7.25.2000	Han
		6,130,963	10.10.2000	Uz et al.
		6,188,725	2.13.2001	Sugiyama
		6,192,081	2.20.2001	Chiang et al.

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Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
		6,201,927	3.13.2001	Comer
		6,205,176	3.20.2001	Sugiyama
		6,215,820	4.10.2001	Bagni et al.
		6,219,464	4.17.2001	Greggain et al.
		6,243,418	6.5.2001	Kim
		6,263,024	7.17.2001	Matsumoto
		6,271,885	8.7.2001	Sugiyama
		6,282,243	8.28.2001	Kazui et al.
		6,295,376	9.25.2001	Nakaya
		6,307,887	10.23.2001	Gabriel
		6,320,593	11.20.2001	Sobel et al.
		6,337,881	1.8.2002	Chaddha
		6,377,628	4.23.2002	Schultz et al.
		6,381,279	4.30.2002	Taubman
		6,529,632	3.4.2003	Nakaya et al.
		6,539,056	3.25.2003	Sato et al.
		6,563,953	5.13.2003	Lin et al.

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Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
		6,647,061	11.11.2003	Panusopone et al.
		6,650,781	11.18.2003	Nakaya
		6,735,345	5.11.2004	Lin et al.
		6,876,703	4.5.2005	Ismaeil et al.
		6,920,175	7.19.2005	Karczewicz et al.
		6,975,680	12.13.2005	Demos
		7,003,035	2.21.2006	Tourapis et al.
		7,054,494	5.30.2006	Lin et al.

U.S. PATENT APPLICATION DOCUMENTS

Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant
		2002/0154693	10.24.2002	Demos
		2002/0186890	12.12.2002	Lee et al.
		2003/0099292	5.29.2003	Wang et al.
		2003/0112864	6.19.2003	Karczewicz et al.
		2003/0142748	7.31.2003	Tourapis
		2003/0152146	8.14.2003	Lin et al.

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		2004/0001546	1.1.2004	Tourapis et al.
		2004/0008899	1.15.2004	Tourapis et al.
		2004/0047418	3.11.2004	Tourapis et al.
		2005/0013497	1.20.2005	Hsu et al.
		2005/0013498	1.20.2005	Srinivasan
		20050053156	3.10.2005	Lin et al.
		2005/0100093	5.12.2005	Holcomb
		2005/0135484	6.23.2005	Lee
		2005/0147167	7.7.2005	Dumitras et al.
		2005/0157784	7.21.2005	Tanizawa et al.
		2006/0013307	1.19.2006	Olivier et al.
		2006/0072662	4.6.2006	Tourapis et al.
		60/488,710	7.18.2003	Srinivasan et al.

FOREIGN PATENT DOCUMENTS

Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Country
		EP 0 279 053	8.24.1988	Europe
		EP 0 397 402	11.14.1990	Europe

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Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Country
		EP 0 535 746	4.7.1993	Europe
		EP 0 540 350	5.5.1993	Europe
		EP 0 588 653	3.23.1994	Europe
		EP 0 614 318	9.7.1994	Europe
		EP 0 625 853	11.23.1994	Europe
		EP 0 771 114	5.2.1997	Europe
		EP 0 786 907	7.30.1997	Europe
		EP 0 830 029	3.18.1998	Europe
		EP 0 863 675	9.9.1998	Europe
		EP 0 884 912	12.16.1998	Europe
		JP 61205086 (English abstract)	9.11.1986	Japan
		JP 3 129 986 (English abstract)	3.6.1991	Japan
		JP 6-078295 (English abstract)	3.18.1994	Japan
		JP 06-276511 (with English abstract)	9.30.1994	Japan
		JP 06-276481 (with English abstract)	9.30.1994	Japan
		JP 08-140099 (with English abstract)	5.31.1996	Japan
		JP 09-322163 (with English abstract)	12.12.1997	Japan

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Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Country
		JP 6-292188 (English abstract)	10.18.2004	Japan
		JP 3-001688 (English abstract)	1.8.1991	Japan
		JP 7-274171 (English abstract)	10.20.1995	Japan
		KR 102002005365A (English abstract)	1.17.2002	Korea
		WO 00/33581	8.6.2000	PCT
		WO 03/026296	3.27.2003	PCT
		WO 2005/004491	1.13.2005	PCT

Examiner's Initials*	Cite No. (optional)	OTHER DOCUMENTS
		Anonymous, "DIVX Multi-Standard Video Encoder," 2 pp.
		Conklin et al., "Multi-resolution Motion Estimation," Proc. ICASSP '97, Munich, Germany, 4 pp. (1997).
		Ericsson, "Fixed and Adaptive Predictors for Hybrid Predictive/Transform Coding," IEEE Transactions on Comm., Vol. COM-33, No. 12, pp. 1291-1302 (1985).
		Flierl et al., "Multihypothesis Motion Estimation for Video Coding," Proc. DCC, 10 pp. (March 2001).
		Girod, "Efficiency Analysis of Multihypothesis Motion-Compensated Prediction for Video Coding," IEEE Transactions on Image Processing, Vol. 9, No. 2, pp. 173-183 (February 2000).
		Girod, "Motion-Compensation: Visual Aspects, Accuracy, and Fundamental Limits," Motion Analysis and Image Sequence Processing, Kluwer Academic Publishers, pp. 125-152 (1993).
		Horn et al., "Estimation of Motion Vector Fields for Multiscale Motion Compensation," Proc. Picture Coding Symp. (PCS 97), pp. 141-144 (Sept. 1997).

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		Hsu et al., "A Low Bit-Rate Video Codec Based on Two-Dimensional Mesh Motion Compensation with Adaptive Interpolation," <i>IEEE Transactions on Circuits and Systems for Video Technology</i> , Vol. 11, No. 1, pp. 111-117 (January 2001).
		ITU - Q15-F-24, "MVC Video Codec - Proposal for H.26L," Study Group 16, Video Coding Experts Group (Question 15), 28 pp. (document marked as generated in 1998).
		ITU-T Recommendation T.6: Facsimile Coding Schemes and Coding Control Functions for Group 4 Facsimile Apparatus," Facicle VII.3 of the Blue Book (1988).
		Joint Video Team (JVT) of ISO/IEC MPEG and ITU-T VCEG, "Joint Model Number 1, Revision 1 (JM-1r1)," JVT-A003r1, Pattaya, Thailand, 80 pp. (December 2001).
		Joint Video Team of ISO/IEC MPEG and ITU-T VCEG, "Joint Final Committee Draft (JFCD) of Joint Video Specification (ITU-T Recommendation H.264, ISO/IEC 14496-10 AVC," JVT-D157, 218 pp. (August 2002).
		Konrad et al., "On Motion Modeling and Estimation for Very Low Bit Rate Video Coding," <i>Visual Comm. & Image Processing (VCIP '95)</i> , 12 pp. (May 1995).
		Microsoft Corporation, "Microsoft Debuts New Windows Media Players 9 Series, Redefining Digital Media on the PC," 4 pp. (September 4, 2002) [Downloaded from the World Wide Web on May 14, 2004].
		Ribas-Corbera et al., "On the Optimal Motion Vector Accuracy for Block-based Motion-Compensated Video Coders," <i>Proc. SPIE Digital Video Compression</i> , San Jose, CA, 13 pp. (1996).
		Sullivan et al., "Rate-Distortion Optimization for Video Compression," <i>IEEE Signal Processing Magazine</i> , pp. 74-90 (Nov. 1998).
		Sullivan et al., "The H.264/AVC Advanced Video Coding Standard: Overview and Introduction to the Fidelity Range Extensions," 21 pp. (August 2004).
		Tao et al., "Adaptive Model-driven Bit Allocation for MPEG Video Coding," <i>IEEE Transactions on Circuits and Systems for Video Tech.</i> , Vol. 10, No. 1, pp. 147-157 (Feb. 2000).
		"The TML Project WEB-Page and Archive," (including pages of code marked "image.cpp for H.26L decoder, Copyright 1999" and "image.c"), 24 pp.
		Tsang et al., "Fuzzy based rate control for real-time MPEG video," 12 pp.
		Yu et al., "Two-Dimensional Motion Vector Coding for Low Bitrate Videophone Applications," <i>Proc. Int'l Conf. on Image Processing</i> , Los Alamitos, US, pp. 414-417, IEEE Comp. Soc. Press (1995).

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		Wang et al., "Interlace Coding Tools for H.26L Video Coding," <i>Fifteenth Meeting of ITU Telecommunications Standardization Sector, Study Group 16, VCEG, Thailand</i> (December 2001).	

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